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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

JAGAN, MIRELLYS

ART UNIT PAPER NUMBER

2859

DATE MAILED: 03/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/040,952

Applicant(s)

OHSHIMO, JUN

Examiner

Mirellys Jagan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 4, 6, 7, and 9-22 is/are pending in the application.
- 4a) Of the above claim(s) 10-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4, 6, 7 and 17-22 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/14/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The finality of the last Office action has been withdrawn. However, upon further consideration of the previously presented claims and the currently amended claim 7, a new ground(s) of rejection is made in view of Ando et al, Sugiyama, and Fohl et al. This Office action is made final.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 7, 19, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,268,985 to Ando et al [hereinafter Ando].

Ando discloses a light sensor comprising:

a light emitter (not shown) located on a first side of a space;

a light guide (2) located on a second side of the space;

a light receiver (6) also located on the second side of the space such that it receives light emitted from the light guide;

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wherein the light guide takes in the light emitted from the emitter, reflects the taken-in light at a reflection portion (1) in the light guide, and ejects the light toward the receiver; the guide is plate-shaped and comprises the reflection portion (1) disposed on one of two parallel opposing faces of the guide having larger areas than the other faces thereof; the light guide takes in the light through the other of the opposing faces, reflects the taken-in light at the reflection portion (1), and ejects the reflected light from one of the other faces (4); and the intensity of the light emitted is 'substantially' uniform over an entire area of the face from which the light is ejected (see figures 1 and 2).

3. Claims 4, 6, 18, and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,422,713 to Fohl et al [hereinafter Fohl].

Fohl discloses a light sensor comprising:

a light emitter (102) and a light guide (104) both located on a first side of a space;

a light receiver (116) also located on the first side of the space such that it receives light emitted from the light guide and reflected by a reflective object (90) in the space;

wherein the light guide takes in the light emitted from the emitter, reflects the taken-in light at a reflection portion (108) of the light guide, and ejects the light across the space toward the reflective object; the guide is plate-shaped and comprises the reflection portion disposed on one of two parallel opposing faces (110 and 108) of the guide having larger areas than the other faces thereof; the light guide takes in the light through one of the other faces (106), reflects the taken-in light at the reflection portion (108), and ejects the reflected light from the other (110) opposing face; the reflection portion comprises a series of parallel grooves (formed at the

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junction of facets 122(a-e) and regions 124(a-e)); and the intensity of the light emitted is 'substantially' uniform over an entire area of the face from which the light is ejected (see figures 1, 3, and 4).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,232,592 to Sugiyama.

Sugiyama discloses a light sensor comprising:

a light emitter (1) and a light guide (5) both located on a first side of a space;

a light receiver (8) also located on a second side of the space such that it receives light emitted from the light guide;

wherein the light guide takes in the light emitted from the emitter, reflects the taken-in light at a reflection portion (3) of the light guide, and ejects the light across the space toward the receiver; the guide is a plate-shaped rectangular block (having a rectangular cross-section) and comprises the reflection portion (3) disposed on one of two parallel opposing faces of the guide; the light guide takes in the light through a face (2) that is not one of the two opposing faces, reflects the taken-in light at the reflection portion (3), and ejects the reflected light from the other of the two opposing faces; the reflection portion comprises a series of parallel grooves; and the

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intensity of the light emitted is 'substantially' uniform over an entire area of the face from which the light is ejected (see figures 3B, 4, and 6; and column 5, lines 9-11).

Sugiyama teaches that the guide is elongated and has a rectangular cross-sectional area, i.e., is a rectangular block. However, Sugiyama does not disclose which one of the opposing faces of the block the reflection portion is located, i.e., that the reflection portion is located on one of the opposing faces that have the larger area.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Sugiyama by locating the reflection portion on one of the opposing faces of the block that have the larger areas since relocating the reflection portion to one of these faces is only considered to be an obvious modification of Sugiyama that a person having ordinary skill in the art at the time the invention was made would have been able to provide using routine experimentation since the courts have held that there is no invention in shifting the position if the operation of the device would not be thereby modified. See *In re Japikse*, 86 USPQ 70 (CCPA 1950). In this case, the operation of Sugiyama will not be modified by locating the reflection portion on one of the opposing faces of the block that have the larger areas since the guide will be able to transmit the light to the sensor.

Allowable Subject Matter

6. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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7. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose or suggest the following in combination with the remaining limitations of the claim:

A light sensor for detecting entry of an object into a space, the light sensor comprising a light guide wherein the reflection portion comprises a series of parallel grooves (see dependent claim 9).

Conclusion

8. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mirellys Jagan whose telephone number is 571-272-2247. The examiner can normally be reached on Monday-Thursday from 8AM to 4PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ
March 11, 2004



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CHRISTOPHER W. FULTON
PRIMARY EXAMINER